

ONYX-2121

21.5" Intel® Atom D525 Dual Core Processor

High Brightness

Slim Medical Panel PC

ONYX-2121 Manual
June, 2013

Copyright Notice

This document is copyrighted, 2012. All rights are reserved. The original manufacturer reserves the right to make improvements to the products described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission of the original manufacturer. Information provided in this manual is intended to be accurate and reliable. However, the original manufacturer assumes no responsibility for its use, nor for any infringements upon the rights of third parties, which may result from its use.

The material in this document is for product information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, ONYX, assumes no liabilities resulting from errors or omissions in this document, or from the use of the information contained herein.

ONYX reserves the right to make changes in the product design without notice to its users.

Acknowledgments

- Intel[®], Atom D525 is registered trademark of Intel[®] Corporation.
- IBM, PC/AT, are trademarks of International Business Machines Corporation.
- Microsoft[®] Windows is a registered trademark of Microsoft[®] Corporation.

All other product names or trademarks are properties of their respective owners.

Packing List

Before you begin installing your Slim Medical Panel PC, please make sure that the following items have been shipped:

- ONYX-2121 Slim Medical Panel PC
- VESA Screws (M4 x 0.7 x 12mm)
- Utility CD-ROM which contains , Drivers and Utilities

If any of these items are missing or damaged, you should contact your distributor or sales representative immediately.

Headquarters

Onyx Healthcare Inc.

2F., No.135, Ln. 235, Baoqiao Rd., Xindian Dist.,

New Taipei City 231, Taiwan (R.O.C.)

TEL: +886-2-8919-2188

FAX: +886-2-8919-1699

E-mail: sales@onyx-healthcare.com

<http://www.onyx-healthcare.com>

Worldwide Offices:

Onyx Healthcare, USA Inc.

2663 Saturn street, Brea, CA 92821, USA

Tel : +1-714-996-1800

Fax: +1-714-996-1811

Email: usales@onyx-healthcare.com

Onyx Healthcare EUROPE B.V.

Ekkersrijt 4002, 5692 DA Son, Netherlands

Tel : +31-(0)499-462020

Fax: +31-(0)499-462010

Email: eusales@onyx-healthcare.com

Onyx Healthcare Technology GmbH

An der Trift65d

63303 Dreieich , Germany

TEL: +49-(0)61033-7479-00

Fax: +49-(0)61033-7479-49

Email: eusales@onyx-healthcare.com

Onyx Healthcare (Nanjing) INC.

Room 1318, Metallurgy Building , East Zhongshan Road,
Nanjing, China

Tel: +86-025-58859841

Fax: +86-025-85088070

Email: Jonwang@onyx-healthcare.com

Onyx Healthcare Singapore PTE LTD

57 Genting Lane, #07-00, Singapore 349564

Tel: +65-67498749

Fax +65-67461595

Email: sgsales@onyx-healthcare.com

Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning.
Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation.
Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. **Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.**
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified

service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

- a. The power cord or plug is damaged.
- b. Liquid has penetrated into the equipment.
- c. The equipment has been exposed to moisture.
- d. The equipment does not work well, or you cannot get it to work according to the users manual.
- e. The equipment has been dropped and damaged.
- f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

16. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. [UL 60950-1](#) for IT equipment and [ANSI/AAMI ES 60601-1](#) / [IEC 60601-1](#) series for systems – shall comply with the standard [IEC 60601-1-1](#), Safety requirements for medical electrical systems. Equipment not complying with [ANSI/AAMI ES 60601-1](#) shall be kept outside the patient environment, as defined in the standard.)

Caution:

It may cause the danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer.

Classification

1. Degree of protection against electric shock: Not classified.
2. Degree of protection against the ingress of water: IPX0
3. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
4. Mode of operation: Continuous
5. Type of protection against electric shock: Class I equipment
6. No Applied part, No AP / APG

FCC

Warning!



This device complies with Part 18 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

UL Module Description



Onyx-2121 AC modules are developed to suitable for the Classification Mark requirement

Safety Symbol Description

The following safety symbols are the further explanations for your reference.

	<i>Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with ANSI/AAMI ES 60601-1: 2005 AND CAN/CSA-C22.2 No. 60601-1:08</i>
	Attention, consult ACCOMPANYING DOCUMENTS.
	Stand-by (Green light)
	Ground wire Protective Ground wire.
	<i>Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with UL 60601-1, and CAN/CSA C22.2 NO. 601.1</i>

Below Table for China RoHS Requirements

產品中有毒有害物質或元素名稱及含量

ONYX Panel PC/ Workstation

部件名稱	有毒有害物質或元素					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
印刷電路板 及其電子元件	×	○	○	○	○	○
外部信號 連接器及線材	×	○	○	○	○	○
外殼	×	○	○	○	○	○
中央處理器 與記憶體	×	○	○	○	○	○
硬碟	×	○	○	○	○	○
液晶模組	×	○	○	○	○	○
光碟機	×	○	○	○	○	○
觸控模組	×	○	○	○	○	○
電源	×	○	○	○	○	○

O: 表示該有毒有害物質在該部件所有均質材料中的含量均在
SJ/T 11363-2006 標準規定的限量要求以下。

X: 表示該有毒有害物質至少在該部件的某一均質材料中的含量超出
SJ/T 11363-2006 標準規定的限量要求。

備註:

一、此產品所標示之環保使用期限，系指在一般正常使用狀況下。

二、上述部件物質中央處理器、記憶體、硬碟、光碟機、觸控模組為選購品。

Contents

Chapter 1 General Information

1.1 Introduction.....	1-1
1.2 Features	1-2
1.3 Specification	1-3
1.4 Dimension	1-7

Chapter 2 Hardware Installation

2.1 Safety Precautions	2-1
2.2 A Quick Tour of the ONYX-2121.....	2-2
2.3 VESA Mounting Holes.....	2-4

Chapter 3 Driver Installation

3.1 Installation	3-3
------------------------	-----

Appendix A Miscellanea

A.1 General Cleaning Tips.....	A-2
A.2 Cleaning Tools	A-3
A.3 Scrap Computer Recycling	A-5

Chapter

1

General Information

1.1 Introduction

The ONYX-2121 is a Slim Medical Panel PC with Intel® Atom D525 1.8GHz Dual Core processor-based computer that is designed to serve as a point of care station. It is a PC-based system with 22" true color TFT LCD display, Zero Noise solution; integrated multimedia functions make them the perfect platforms to build comprehensive lifestyle computing applications.

The ONYX-2121 includes all the features of a powerful computer into a slim and attractive chassis. ONYX-2121 has 250 nits TFT displays with 1366 x 768 resolution, and with 22" LCD respectively. Integrating with high brightness LCD is easier to analyze DICOM images. It supports 2.5" Hard Disk Drive storage function and one Mini Card slot for WLAN expansion. Moreover, they feature flexible I/O ports, such as six USB2.0, two isolated RS-232 and two isolated Gigabit LANs.

Convenient operation, Silent, compact, mobility and highly integrated multimedia system let you to focus on healthcare utility, interactive information displays, automation control systems, general desktop usage, multimedia recreation, and other medical requirements.

1.2 Features

- 22" 1366x768 TFT LCD Display
- Easy To Use, Compact, Simple Design
- Fanless, Zero Noise
- 1000 : 1 Contrast Wide View Angle
- 250 nits High Brightness
- Intel® Atom™ D525 1.8GHz Processor
- 5-wire Resistive Touch Screen
- 802.11 b/g/n Wireless LAN (Optional)
- Weight: 6.4 Kg, Thickness: 70 mm

1.3 Specification

Hardware Specifications

Display	22" 1366x768 TFT LCD
System Memory	204-pin DDRIII SODIMM x 2, Max. 4GB
CPU Board	Intel® Atom D525 1.8GHz Dual Core Processor
Drive Bay	2.5" SATA Hard Disk Drive/SSD
Expansion	Mini-Card x 2
Button	Brightness: "+" / "-" ; Sound: "+" / "-" ; Power SW
I/O	USB 2.0 x 6 Isolated RS-232 x 2(patient connection) Isolated Gigabit LAN x 2(patient connection) Line-out, Mic-in Speaker x 2 (3W)
Power Requirement	DC 24V

LCD Specifications

Display Type	22" color TFT LCD
Max. Resolution	1366 x 768
Max. Colors	16.7M
Luminance (cd/m2)	250 (TYP)
Viewing Angle	170°(H)
	160°(V)

Contrast Ratio	1000 : 1
Brightness Control	Yes
Back Light Life Time	30,000 Hrs

Note: All ONYX's LCD products are manufactured with High precision technology. However, there are a small number of defective pixels in all LCD panels that are not able to change color. This is a normal occurrence for all LCD displays from all manufacturers and should not be noticeable or objectionable under normal operation. ONYX LCD panels are qualified for industry standard conditions in the following: total 7 dead pixels on a screen or if there are 3 within 1 inch square area of each other on the display.

Mechanical Specifications

Architecture	Close-frame
Front Bezel	Plastic bezel with resistive touch screen
Color	White
Mounting / Holder	VESA 75/100mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension (W x H x D)	21.5" x 13.8" x 2.8" (545mm x 351mm x 70mm)
Net Weight	14.1lb(6.4 kg)
Gross Weight	20.5lb(9.3 kg)
Packing Filler	PE

Power Supply Specifications

Input Voltage	ELJINTEK INC GMPU70A-6 100 ~ 240 Vac, 50-60 Hz, 1.8-0.8A
----------------------	---

Output Voltage	ELJINTEK INC GMPU70A-6 24V, 2.91A, 70W max
MTBF	61320 Calculated Hours (7 years)

Environmental Specifications

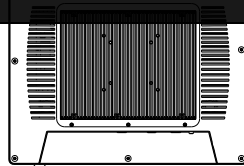
Operating Temperature	10°C to 40°C (50°F ~104°F)
Operating Humidity	5% to 95% RH non-condensing
Storage Temperature	-20°C to 60°C (-4°F ~140°F)
Storage Humidity	10% to 90%@ 40°C, non-condensing
Vibration	0.5G / 5 ~ 500Hz (Random) / operation
Shock	15G peak acceleration (11 msec. duration) / operation
Drop	76cm (1 Corner, 3 Edge, 6 Surface)
EMI / Safety	CE / FCC Class B/ EN 60601-1
Noise	Zero noise
Input Power Rating	ELJINTEK INC GMPU70A-6 100 ~ 240 Vac, 50-60 Hz, 1.8-0.8A

Touch Screen

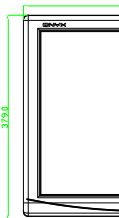
Type	5-wire, Analog Resistive
Interface	USB Interface
Resolution	2048 x 2048
Light Transmission	> 80% ± 2%
Life Time	35 million times

Slim Medical Panel PC

ONYX-2121



379.0



Chapter

2

Hardware Installation

2.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth"

Do not modify this equipment without authorization of the manufacturer.

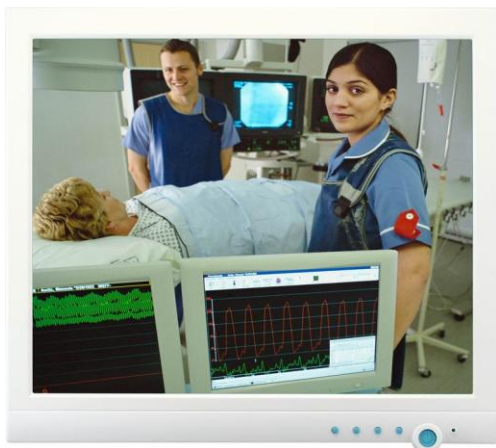
Caution!



Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 A Quick Tour of the ONYX-2121

Before you start to set up the ONYX-2121, take a moment to become familiar with the locations and purposes of the controls, drives, connections and ports, which are illustrated in the figures below. When you place the ONYX-2121 upright on the desktop, its front panel appears as shown in Picture 2-1.



Picture 2-1: Front View of the Slim Medical Panel PC

When you turn the Slim Medical Panel PC around and look at its rear cover, the sunken I/O section is at the bottom of the PC, as shown in Picture 2-2. (The I/O section includes various I/O ports, including DC-in, Serial ports, VGA, Ethernet, USB.) Only assemble with the Mini card.

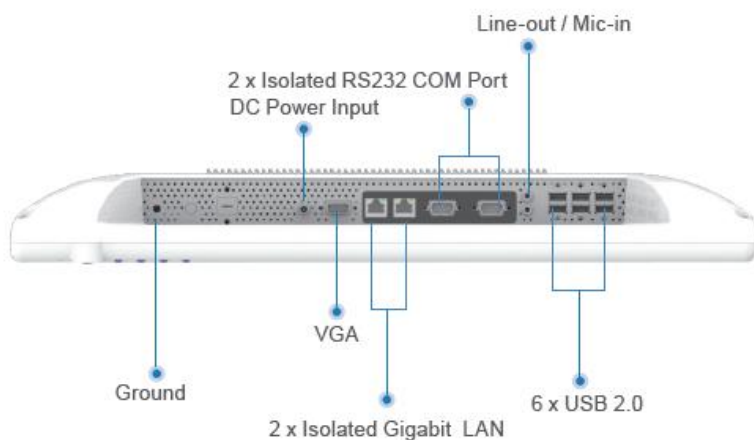
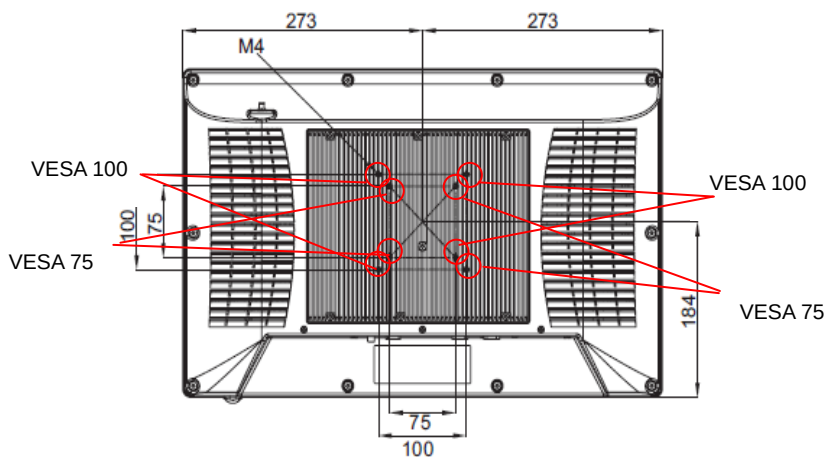


Figure 2.2: Rear view of ONYX-2121

2.3 VESA Mounting Holes

VESA Screws (M4 x 0.7 x 12mm)



Appendix

A

Miscellanea

A.1 General Cleaning Tips

You may need the following precautions before you begin to clean the computer. When you clean any single part or component for the computer, please read and understand the details below fully.

1. Never spray or squirt the liquids directly onto any computer component. If you need to clean the device, please rub it with a piece of dry cloth.
2. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
3. Turn the system off before you start to clean up the component or computer.
4. Never drop the components inside the computer or get circuit board damp or wet.
5. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
6. Try not to put any food, drink or cigarette around the computer.

A.2 Cleaning tools

Although many companies have created products to help improve the process of cleaning your computer and peripherals users can also use household items to clean their computers and peripherals. Below is a listing of items you may need or want to use while cleaning your computer or computer peripherals.

Keep in mind that some components in your computer may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning tips.

- **Cloth** - A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- **Water or rubbing alcohol** – You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the computer. Unknown solvents may be harmful to the plastics parts.
- **Vacuum cleaner** - Absorb the dust, dirt, hair, cigarette particles, and other particles out of a computer can be one of the best methods of cleaning a computer. Over time these items can restrict the airflow in a computer and cause circuitry to corrode.

- **Cotton swabs** - Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.
- **Foam swabs** - Whenever possible it is better to use lint free swabs such as foam swabs.

Note:

We strongly recommended that you should shut down the system before you start to clean any single components.

Please follow the steps below.

1. Shut down the panel PC and then disconnect the power cord before cleaning.
2. Do not spray any liquid detergent directly on the panel PC or use any detergent containing flammable material to clean the panel PC. The surface needs to be cleaned with neutral detergent other than any acidic or alkali solutions.
3. Wipe the surface using a clean cellulose sponge or soft cloth dampened with detergent and remove any extra moisture with a dry cloth.

A.3 Scrap Computer Recycling

If the computer equipments need the maintenance or are beyond repair, we strongly recommended that you should inform us as soon as possible for the suitable solution. For the computers that are no longer useful or work well, please contact with worldwide distributors for recycling.

The worldwide distributors show on the following website:

<http://www.onyx-healthcare.com.tw/Contact.php>

Note:

Follow the national requirements to dispose unit